

Applicants: Schaepe et al.
Serial No.: 10/687,477
Filing Date: October 15, 2003
Docket No.: DEF-001

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (currently amended) ~~A method for extracting information from input data, comprising:~~

~~—— (a) mapping said input data into a data object network, said input data comprising semantic units, wherein a semantic cognition network comprises said data object network, a class object network and a processing object network, said semantic cognition network using a set of algorithms to process said semantic units;~~

~~—— (b) defining a processing object in said processing object network by selecting a data domain in said data object network, a class domain in said class object network and an algorithm from said set of algorithms, said processing object comprising said data domain, said class domain and said algorithm;~~

~~—— (c) processing said semantic units in said processing object network using said processing object~~A method for extracting information from digital image data comprised of semantic units, comprising:

—— (a) defining a data object network by selecting a plurality of semantic units from said digital image data, wherein a semantic cognition network comprises said data object network, a class object network and a processing object network, wherein said class object network comprises categories of classifications of said selected semantic units, wherein said semantic cognition network is implemented on a distributed network of computers and uses a set of algorithms to process said selected semantic units;

—— (b) defining a processing object in said processing object network by selecting a data domain in said data object network, a class domain in said class

Applicants: Schaepe et al.
Serial No.: 10/687,477
Filing Date: October 15, 2003
Docket No.: DEF-001

object network and an algorithm from said set of algorithms, wherein said processing object comprises said data domain, said class domain and said algorithm; and

(c) processing said selected semantic units in said processing object network using said processing object.

2. (original) The method of claim 1, wherein said defining in step (b) is performed multiple times, and wherein each of said multiple times occurs in parallel.

3. (original) The method of claim 2, further comprising, between step (b) and step (c):

(d) linking plural processing objects defined when step (b) is performed multiple times, wherein said plural processing objects are linked with each other to form an execution control based on said linking plural processing objects.

4. (original) The method of claim 3, wherein said linking in step (d) comprises at least one of executing said plural processing objects as sub-processing objects, executing said plural processing objects in series or executing said plural processing objects in parallel.

5. (original) The method of claim 1, wherein said processing object is executed several times, each time processing additional semantic units.

6. (original) The method of claim 1, wherein said processing object network comprises a control structure taken from the group consisting of a loop, a branch, a function call, a jump and an execution control.

7. (original) The method of claim 1, wherein said class object network and said processing object network are linked together via said class domain.

Applicants: Schaepe et al.
Serial No.: 10/687,477
Filing Date: October 15, 2003
Docket No.: DEF-001

8. (currently amended) The method of claim 1, wherein said semantic cognition network uses classifying link objects to process said selected semantic units, and wherein said data object network and said class object network are linked together via said classifying link objects.

9. (original) The method of claim 1, wherein said data object network and said processing object network are linked together via link objects that are dynamically generated during said processing in step (c) based on said data domain.

10. (original) The method of claim 1, wherein one processing object is unambiguously defined by one data domain, one class domain and one algorithm.

11. (original) The method of claim 1, wherein said processing using said processing object in step (c) comprises the steps of:

(c1) extracting a subset of data objects in said data domain from said data object network; and

(c2) applying said algorithm to each of said data object in said subset of data objects.

12. (original) The method of claim 1, wherein said data domain is a subset of said data object network, said class domain is a subset of said class object network, and said algorithm is a subset of said set of algorithms.

13. (currently amended) The method of claim 1, wherein a single processing object processes said selected semantic units in at least one of said data object network, said class object network and said processing object network based on said data domain, said class domain and said algorithm.

Applicants: Schaepe et al.
Serial No.: 10/687,477
Filing Date: October 15, 2003
Docket No.: DEF-001

Claims 14 – 17 (canceled)

18. (currently amended) A system for extracting information from input data, comprising:

mapping means for mapping said input data into a data object network, wherein said input data comprises semantic units, wherein a semantic cognition network comprises said data object network, a class object network and a processing object network, wherein said class object network comprises categories of classifications of said semantic units, wherein said semantic cognition network uses a set of algorithms to process said semantic units, and wherein said semantic cognition network is implemented on a computer;

defining means for defining a processing object in said processing object network by selecting a data domain in said data object network, a class domain in said class object network and an algorithm from said set of algorithms, said processing object comprising said data domain, said class domain and said algorithm; and

processing means for processing said semantic units in said processing object network using said processing object.

19. (original) The system of claim 18, wherein said defining means performs said defining several times, wherein a linking means links said processing object to a second processing object before said processing to form an execution control based on how said processing object is linked to said second processing object.

20. (original) The system of claim 19, wherein said linking means links said processing object to said second processing object by executing said processing objects as sub-processing objects, by executing said processing objects in series or by executing said processing objects in parallel.

Applicants: Schaepe et al.
Serial No.: 10/687,477
Filing Date: October 15, 2003
Docket No.: DEF-001

21. (original) The system of claim 18, wherein said processing means executes said processing object multiple times.

22. (original) The system of claim 18, wherein said processing object network comprises a control structure taken from the group consisting of a loop, a branch, a function call, a jump and an execution control.

23. (original) The system of claim 18, wherein said class object network and said processing object network are linked together via said class domain.

24. (original) The system of claim 18, wherein said semantic cognition network uses classifying link objects to process said semantic units, and wherein said data object network and said class object network are linked together via said classifying link objects.

25. (original) The system of claim 18, wherein said data object network and said processing object network are linked together via link objects that are dynamically generated based on said data domain.

26. (original) The system of claim 18, wherein one processing object is unambiguously defined by one data domain, one class domain and one algorithm.

27. (original) The system of claim 18, wherein said processing means extracts a subset of data objects in said data domain from said data object network and applies said algorithm to each of said data object in said subset of data objects.

28. (original) The system of claim 18, wherein said data domain is a subset of said data object network, said class domain is a subset of said class object network, and said algorithm is a subset of said set of algorithms.

Applicants: Schaepe et al.
Serial No.: 10/687,477
Filing Date: October 15, 2003
Docket No.: DEF-001

29. (original) The system of claim 18, wherein a single processing object processes said semantic units in at least one of said data object network, said class object network and said processing object network based on said data domain, said class domain and said algorithm.

30. (currently amended) A system implemented on a computer for extracting knowledge, ~~from a semantic cognition network~~ comprising:

a data ~~unit~~object network;

a class ~~unit~~object network;

~~an algorithm unit network, wherein semantic units are networked to each other in each of said data unit object network; and said class unit network and said algorithm unit network, wherein said semantic units comprise digital image data;~~

defining means for defining a processing unit by selecting a data domain in said data ~~unit~~object network, a class domain in said class ~~unit~~object network and an algorithm domain ~~in said algorithm unit network~~ from a set of algorithms, each of which being part of said processing unit; and

processing means for processing said semantic units in accordance with said data domain, said class domain and said algorithm ~~domain~~.

31. (currently amended) A system for extracting information from ~~input~~digital image data, comprising:

a data object network having a data domain, said data object network receiving said ~~input~~digital image data, ~~said input data comprising semantic units;~~

a class object network having a class domain; and

a processing object network having a processing object, wherein a semantic cognition network comprises said data object network, said class object network and said processing object network, wherein said semantic cognition network uses a set of algorithms to process said ~~semantic units~~digital image

Applicants: Schaepe et al.
Serial No.: 10/687,477
Filing Date: October 15, 2003
Docket No.: DEF-001

data, wherein said processing object comprises said data domain, said class domain and an algorithm from said set of algorithms, ~~and~~ wherein said processing object network processes said semantic units using said processing object, and wherein said semantic cognition network is implemented on a computer.

32. (original) The system of claim 31, wherein said processing object network comprises a control structure taken from the group consisting of a loop, a branch, a function call, a jump and an execution control.

33. (new) The system of claim 31, wherein said digital image data is obtained from microscopic pictures taken from tissue samples.

34. (new) The system of claim 31, wherein said digital image data is obtained from a geographical satellite picture.

35. (new) The method of claim 1, wherein said digital image data is obtained from microscopic pictures taken from tissue samples.

36. (new) The method of claim 1, wherein said digital image data is obtained from a geographical satellite picture.